CLAIMS

1.   A method enabling a person to visualise images comprising the steps of:

encoding spatial information relating to a feature or features contained within an image into the form of one or more musical sequences; and

playing the musical sequence or sequences to the person.

2.   A method according to claim 1 in which spatial information is encoded by selecting a note or chord dependent on the distribution of the feature or features along an axis.

3.   A method according to claim 1 or claim 2 in which the image comprises a letter or a number.

4.   A method according to any of claims 1 to 3 claim 1 in which the image comprises the person's environment.

5.   A method according to any of the previous claim claim 1 in which spatial information is encoded by:

represent the image as a 2D image

forming one or more musical sequences, each comprising a series of notes or chords, in which i) each note or chord is selected dependent upon the distribution of the feature or features along a portion of the 2D image and ii) different notes or chords in a sequence correspond to different portions
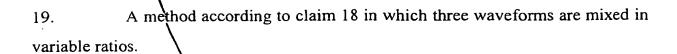
of the 2D image.

6.   A method according to claim 5 in which the 2D image, or a portion of the 2D image, is divided into a matrix of pixels, and i) each note or chord is selected dependent upon the distribution of the feature or features along a column (or rows) of pixels and ii) different notes or chords in a sequence correspond to the distribution of the feature or features along different columns (or rows) of pixels.

7.   A method according to claim 6 in which a different note is associated with each pixel along a column and, if a feature recognised as being present in a pixel, the note corresponding to that pixel comprises part of the musical sequence.

8.   A method according to ~~any of claims 1 to 7~~ claim 1 enabling a person to visualise moving features comprising the step of playing a plurality of musical sequences corresponding to different positions and/or orientations of the moving feature.

9.   A method according to ~~any previous claims~~ claim 1 in which a subset of the full image is encoded into the musical sequence or sequences.

10.   A method according to claim 9 in which predetermined features are extracted from the image, and said predetermined features are encoded into a musical sequence or sequences.

11.   A method according to ~~any previous claims~~ claim 10 in which a feature is simplified by encoding a portion of the feature as a musical sequence.

12.   A method according to claim 11 in which the feature is encoded by encoding different portions of the feature as different musical sequences.

13.   A method according to ~~any of the previous claims~~ *claim 10* in which the image is encoded into the form of a plurality of musical sequences which are played to the person as a melody.

14.   A method according to ~~any of the previous claims~~ *claim 13* in which the image is encoded as a plurality of musical sequences, each corresponding to different spatial resolutions.

15.   A method according to claim 14 in which the image is divided into two or more concentric zones, the zone at the centre of the image being <u>optionally</u> encoded at the highest spatial resolution and the zone furthest from the centre of the image being encoded at the lowest spatial resolution.

16.   A method according to claim 15 in which a feature or features are visualised by obtaining a plurality of images in a saccadic-like series of movements, functionally equivalent to a scan path that the eye follows when it examines an object.

17.   A method according to ~~any of claims 14 to 16~~ *claim 14* in which the spatial resolution corresponding to a musical sequence is indicated by the duration of the notes and chords in the sequence.

18.   A method according to ~~any of the previous claims~~ *claim 1* in which the colour of the feature or features is encoded by producing a musical sequence or sequences which comprise a plurality of different sets of waveforms corresponding to the harmonics of different sound instruments mixed in variable ratios.

19.   A method according to claim 18 in which three waveforms are mixed in variable ratios.

20.   A method according to claim 19 in which the three waveforms are produced by filtering a master waveform between different frequency ranges.

21.   A method according to ~~any of the previous claims~~ claim 1 in which the brightness of the feature or features is encoded by varying the intensity of the musical sequence or sequences.

22.   A method according to ~~any previous claims~~ claim 1 in which image motion cues are translated into equivalent sound patterns which are utilised to segregate foreground features from background in 3D and produce information on the relative depth between features.

23.   A device enabling a person to visualise images comprising:

imaging means for obtaining images of a feature or features;

encoding means for encoding spatial information relating to the feature or features according to any of claims 1 to 22; and

playing means for playing the musical sequence or sequences to the person.

24.   A device according to claim 23 in which the imaging means comprises at least one video camera.

25.   A device according to claim 23 in which the imaging means comprises at

least one charge coupled detector.

26. A device according to any of ~~claims 23 to 25~~ *claim 23* in which the encoding means comprises a microprocessor.

27. A device according to any of ~~claims 23 to 26~~ *claim 23* in which the playing means comprises an ear-piece.

28. A portable device according to any of ~~claims 23 to 27~~ *claim 23* in which the imaging means is hand-held.